

From the INTERNATIONAL BUREAU

**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II  
OF THE PATENT COOPERATION TREATY)  
(PCT Rules 44bis.3(c) and 72.2)

To:

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Date of mailing (day/month/year) 26 May 2006 (26.05.2006)	<b>IMPORTANT NOTIFICATION</b>
Applicant's or agent's file reference FP04-0229-00	
International application No. PCT/JP2004/010497	International filing date (day/month/year) 23 July 2004 (23.07.2004)
Applicant HAMAMATSU PHOTONICS K.K. et al	

## 1. Transmittal of the translation to the applicant.



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

## 2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

## 3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Masashi Honda
Facsimile No.+41 22 740 14 35	Facsimile No.+41 22 338 70 10



## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference FP04-0229-00	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/JP2004/010497	International filing date ( <i>day/month/year</i> ) 23 July 2004 (23.07.2004)	Priority date ( <i>day/month/year</i> ) 29 July 2003 (29.07.2003)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant HAMAMATSU PHOTONICS K.K.			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 740 14 35	Date of issuance of this report 15 May 2006 (15.05.2006)
	Authorized officer  Masashi Honda Telephone No. +41 22 338 70 10

# PATENT COOPERATION TREATY

TRANSLATION

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From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference  
**FP04-0229-00**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/JP2004/010497**

International filing date (day/month/year)

**23.07.2004**

Priority date (day/month/year)

**29.07.2003**

International Patent Classification (IPC) or both national classification and IPC

Applicant

**HAMAMATSU PHOTONICS K.K.**

1. This opinion contains indications relating to the following items:

- |                                     |              |  |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the opinion   |
| <input type="checkbox"/>            | Box No. II   | Priority   |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability   |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention   |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited  |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application   |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application  |

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/010497

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
- a. type of material
- ☐ a sequence listing
- ☐ table(s) related to the sequence listing
- b. format of material
- ☐ in written format
- ☐ in computer readable form
- c. time of filing/furnishing
- ☐ contained in the international application as filed.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/010497

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	3	YES
	Claims	1, 2, 4, 5, 6, 7	NO
Inventive step (IS)	Claims		YES
	Claims	1-7	NO
Industrial applicability (IA)	Claims	1-7	YES
	Claims		NO

2. Citations and explanations:

Document 1: JP 2003-144437 A (Hitachi Medical Corp.), 20 May 2003. Full text (Family: none)  
 Document 2: JP 9-184800 A (Shimadzu Corp.), 15 July 1997. Full text (Family: none)  
 Document 3: JP 2002-472106 A (Hitachi, Ltd.), 18 June 2002. Full text (Family: none)  
 Document 4: JP 2002-102230 A (Keio University), 09 April 2002. Full text (Family: none)  
 Document 5: JP 2001-337033 A (Shimadzu Corp.), 07 December 2001. Full text (Family: none)  
 Document 6: JP 6-343625 A (Hamamatsu Photonics Kabushiki Kaisha), 20 December 1994. Full text (Family: none)

Claims 1, 2, 4, 5, 6, and 7/Documents 5

Document 5 describes the invention of a scattering absorber measuring device provided with a plurality of measuring modules that combine light-emitting means and light-detecting means (Fig. 4), wherein there is sequential light transmission thereto and the detection is performed synchronously to detect separately for each module (Par. No. 0028), wherein the light source is either provided one each for each light-emitting means (Fig. 2 (b), Fig. 4), or one light source shared by a plurality of light-emitting means (Fig. 2 (a)), and wherein either the detecting means are provided independently for each measuring module (Fig. 4) or the detecting means are shared in part between a plurality of measuring modules corresponding to each of the light sources (Fig. 1, Fig. 9), and thus there is no structural difference between these and the inventions of the claims listed above, and thus the inventions in each of these claims does not appear to possess novelty.

Note that the use of a delay element comprising optical fibers, in order to shift the timing of light-emitting of a pulse light source beam in a scattering absorber measuring device is described in documents 2.

Claims 3/Documents: 5 and 6

Having the light-emission period of a light source pulse beam be no more than 1 microsecond (76MHz; Par. No. 0069) in a device and method for measuring a scattering absorber using a pulse light source is described in documents 6.

The invention of the aforementioned claim is no more than the use of a coefficient of the well-known numeric range in described in the aforementioned document 6 to the light source control coefficient of the invention described in document 5, and thus the invention of claim 3 does not appear to involve an inventive step.

Claims 1, 5, and 7/Documents: 3

The invention of a device and method for measuring a scattering absorber provided with a plurality of measuring modules that combine light-emitting means and light-detecting means, wherein light is emitted sequentially thereto and detection is performed with the detection synchronized to detect each module separately, wherein a single light source shared by a plurality of light-emitting means is described, and thus the inventions of the aforementioned claims do not appear to possess novelty.

Claims 1 and 5/Documents: 1

Document 1 describes the invention of a device and method for measuring a scattering absorber comprising a plurality of measuring modules 104, each comprising a plurality of light-emitting means and a plurality of light-detecting means, where light emission and detection is performed sequentially using a light source device 102 and a measuring part 105, equipped in each of the modules, to detect the scattered and transmitted beam within a living body, essentially simultaneously, and thus there is no difference in structure between this and the invention in the aforementioned claims. Consequently, the inventions described in the aforementioned claims do not appear to possess novelty.